APPENDIX 1: APPEALED CLAIMS

2. The inbred corn seed of claim 1, further defined as an essentially homogeneous population of inbred corn seed.

3. The inbred corn seed of claim 1, further defined as essentially free from hybrid seed.

7. An essentially homogeneous population of corn plants produced by growing the seed of the inbred corn plant LIZL5, a sample of said seed having been deposited under ATCC Accession No. PTA-2192.

8. A corn plant capable of expressing all the physiological and morphological characteristics of the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

9. The corn plant of claim 8, further comprising a cytoplasmic or nuclear gene conferring male sterility.

10. A tissue culture of regenerable cells of inbred corn plant LIZL5, wherein the tissue regenerates plants capable of expressing all the physiological and morphological characteristics of the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

11. The tissue culture of claim 10, wherein the regenerable cells comprise cells derived from embryos, immature embryos, meristematic cells, immature tassels, microspores, pollen, leaves, anthers, roots, root tips, silk, flowers, kernels, ears, cobs, husks, or stalks.

12. The tissue culture of claim 11, wherein the regenerable cells are in the form of protoplasts or callus.

13. A corn plant regenerated from the tissue culture of claim 10, wherein said corn plant is capable of expressing all of the physiological and morphological characteristics of the inbred

corn plant designated LIZL5, a sample of the seed of said inbred corn plant designated LIZL5 having been deposited under ATCC Accession No. PTA-2192.

14. An inbred corn plant cell of the corn plant of claim 8, said cell comprising:
    (a) an RFLP genetic marker profile in accordance with the profile shown in Table 6; or
    (b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

15. A corn seed comprising the inbred corn plant cell of claim 14.

16. A tissue culture comprising the inbred corn plant cell of claim 14.

17. The inbred corn plant of claim 8, comprising:
    (a) an RFLP genetic marker profile in accordance with the profile shown in Table 6; or
    (b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

18. A process of producing corn seed, comprising crossing a first parent corn plant with a second parent corn plant, wherein said first or second corn plant is the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192, wherein seed is allowed to form.

19. The process of claim 18, further defined as a process of producing hybrid corn seed, comprising crossing a first inbred corn plant with a second, distinct inbred corn plant, wherein said first inbred corn plant is the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

20. The process of claim 19, wherein crossing comprises the steps of:
    (a) planting in pollinating proximity seeds of said first and second inbred corn plants;
    (b) cultivating the seeds of said first and second inbred corn plants into plants that bear flowers;

(c) emasculating the male flowers of said first or second inbred corn plant to produce an emasculated corn plant;

(d) allowing cross-pollination to occur between said first and second inbred corn plants; and

(e) harvesting seeds produced on said emasculated corn plant.

21. The process of claim 20, further comprising growing said harvested seed to produce a hybrid corn plant.

22. Hybrid corn seed produced by the process of claim 20.

23. A corn plant produced by the process of claim 21.

24. The corn plant of claim 23, wherein the plant is a first generation (F_1) hybrid corn plant.

25. The corn plant of claim 4, further comprising a single locus conversion.

26. The corn plant of claim 25, wherein the single locus was stably inserted into a corn genome by transformation.

27. The corn plant of claim 25, wherein the locus is selected from the group consisting of a dominant allele and a recessive allele.

28. The corn plant of claim 25, wherein the locus confers a trait selected from the group consisting of herbicide resistance, insect resistance, resistance to bacterial, fungal, nematode or viral disease, yield enhancement, waxy starch, improved nutritional quality, enhanced yield stability, male sterility and restoration of male fertility.

29. A method of preparing a transgenic maize cell comprising:

a) providing cells of inbred corn plant LIZL5, a sample of the seed of the inbred LIZL5 having been deposited under ATCC Accession No. PTA-2192;

b) contacting said cells with a pre-selected DNA; and

c) identifying at least a first transgenic cell of inbred corn plant LIZL5 which has been transformed with said pre-selected DNA.

30. The method of claim 29, further comprising the step of:

d) regenerating a fertile transgenic plant from said transgenic cell.

31. The method of claim 29, wherein said contacting comprises a method selected from the group consisting of microprojectile bombardment, PEG mediated transformation of protoplasts, electroporation, silicon carbide fiber mediated transformation, or *Agrobacterium*-mediated transformation.

32. The method of claim 31, wherein said contacting comprises use of microprojectile bombardment.

33. The method of claim 31, wherein said contacting comprises use of PEG mediated transformation of protoplasts.

34. The method of claim 31, wherein said contacting comprises use of electroporation.

35. The method of claim 31, wherein said contacting comprises use of silicon carbide fiber mediated transformation.

36. The method of claim 31, wherein said contacting comprises use of *Agrobacterium*-mediated transformation.

37. A fertile transgenic maize plant preparable by the process of claim 30.

38. A seed of the fertile transgenic maize plant of claim 37, wherein said seed comprises said pre-selected DNA.

39. A plant grown from the seed of claim 38, said plant comprising said pre-selected DNA.

APPENDIX 2: PENDING CLAIMS

1. Inbred corn seed of the corn plant LIZL5, a sample of said seed having been deposited under ATCC Accession No. PTA-2192.

2. The inbred corn seed of claim 1, further defined as an essentially homogeneous population of inbred corn seed.

3. The inbred corn seed of claim 1, further defined as essentially free from hybrid seed.

4. An inbred corn plant produced by growing the seed of the inbred corn plant LIZL5, a sample of said seed having been deposited under ATCC Accession No. PTA-2192.

5. Pollen of the plant of claim 4.

6. An ovule of the plant of claim 4.

7. An essentially homogeneous population of corn plants produced by growing the seed of the inbred corn plant LIZL5, a sample of said seed having been deposited under ATCC Accession No. PTA-2192.

8. A corn plant capable of expressing all the physiological and morphological characteristics of the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

9. The corn plant of claim 8, further comprising a cytoplasmic or nuclear gene conferring male sterility.

10. A tissue culture of regenerable cells of inbred corn plant LIZL5, wherein the tissue regenerates plants capable of expressing all the physiological and morphological characteristics

of the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

11. The tissue culture of claim 10, wherein the regenerable cells comprise cells derived from embryos, immature embryos, meristematic cells, immature tassels, microspores, pollen, leaves, anthers, roots, root tips, silk, flowers, kernels, ears, cobs, husks, or stalks.

12. The tissue culture of claim 11, wherein the regenerable cells are in the form of protoplasts or callus.

13. A corn plant regenerated from the tissue culture of claim 10, wherein said corn plant is capable of expressing all of the physiological and morphological characteristics of the inbred corn plant designated LIZL5, a sample of the seed of said inbred corn plant designated LIZL5 having been deposited under ATCC Accession No. PTA-2192.

14. An inbred corn plant cell of the corn plant of claim 8, said cell comprising:

(a) an RFLP genetic marker profile in accordance with the profile shown in Table 6; or

(b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

15. A corn seed comprising the inbred corn plant cell of claim 14.

16. A tissue culture comprising the inbred corn plant cell of claim 14.

17. The inbred corn plant of claim 8, comprising:

(a) an RFLP genetic marker profile in accordance with the profile shown in Table 6; or

(b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

18. A process of producing corn seed, comprising crossing a first parent corn plant with a second parent corn plant, wherein said first or second corn plant is the inbred corn plant LIZL5, a

sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192, wherein seed is allowed to form.

19. The process of claim 18, further defined as a process of producing hybrid corn seed, comprising crossing a first inbred corn plant with a second, distinct inbred corn plant, wherein said first inbred corn plant is the inbred corn plant LIZL5, a sample of the seed of said inbred corn plant LIZL5 having been deposited under ATCC Accession No. PTA-2192.

20. The process of claim 19, wherein crossing comprises the steps of:

(a) planting in pollinating proximity seeds of said first and second inbred corn plants;

(b) cultivating the seeds of said first and second inbred corn plants into plants that bear flowers;

(c) emasculating the male flowers of said first or second inbred corn plant to produce an emasculated corn plant;

(d) allowing cross-pollination to occur between said first and second inbred corn plants; and

(e) harvesting seeds produced on said emasculated corn plant.

21. The process of claim 20, further comprising growing said harvested seed to produce a hybrid corn plant.

22. Hybrid corn seed produced by the process of claim 20.

23. A corn plant produced by the process of claim 21.

24. The corn plant of claim 23, wherein the plant is a first generation (F_1) hybrid corn plant.

25. The corn plant of claim 4, further comprising a single locus conversion.

26. The corn plant of claim 25, wherein the single locus was stably inserted into a corn genome by transformation.

27. The corn plant of claim 25, wherein the locus is selected from the group consisting of a dominant allele and a recessive allele.

28. The corn plant of claim 25, wherein the locus confers a trait selected from the group consisting of herbicide resistance, insect resistance, resistance to bacterial, fungal, nematode or viral disease, yield enhancement, waxy starch, improved nutritional quality, enhanced yield stability, male sterility and restoration of male fertility.

29. A method of preparing a transgenic maize cell comprising:

a) providing cells of inbred corn plant LIZL5, a sample of the seed of the inbred LIZL5 having been deposited under ATCC Accession No. PTA-2192;

b) contacting said cells with a pre-selected DNA; and

c) identifying at least a first transgenic cell of inbred corn plant LIZL5 which has been transformed with said pre-selected DNA.

30. The method of claim 29, further comprising the step of:

d) regenerating a fertile transgenic plant from said transgenic cell.

31. The method of claim 29, wherein said contacting comprises a method selected from the group consisting of microprojectile bombardment, PEG mediated transformation of protoplasts, electroporation, silicon carbide fiber mediated transformation, or *Agrobacterium*-mediated transformation.

32. The method of claim 31, wherein said contacting comprises use of microprojectile bombardment.

33. The method of claim 31, wherein said contacting comprises use of PEG mediated transformation of protoplasts.

34. The method of claim 31, wherein said contacting comprises use of electroporation.

35. The method of claim 31, wherein said contacting comprises use of silicon carbide fiber mediated transformation.

36. The method of claim 31, wherein said contacting comprises use of *Agrobacterium*-mediated transformation.

37. A fertile transgenic maize plant preparable by the process of claim 30.

38. A seed of the fertile transgenic maize plant of claim 37, wherein said seed comprises said pre-selected DNA.

39. A plant grown from the seed of claim 38, said plant comprising said pre-selected DNA.